

Desmuslin (E-15): sc-49649

BACKGROUND

Cytoskeletal intermediate filaments constitute a diverse group of proteins that are expressed in a highly tissue-specific manner. Intermediate filaments are composed of two-chain, α -helical, coiled-coil molecules arranged on an imperfect helical lattice. They are widely used as markers for distinguishing individual cell types within a tissue and identifying the origins of metastatic tumors. Desmuslin is a type-VI intermediate filament which may act as a mechanical support to the muscle fibers by forming a linkage between the extracellular matrix via the Z-disk and the dystrophin-associated protein complex (DAPC). The Desmuslin protein interacts with desmin as well as α -dystrobrevin and is mainly expressed in heart and skeletal muscle, but can also be detected in brain. Desmuslin contains a conserved rod domain, a short N-terminal domain and a long C-terminal domain.

REFERENCES

1. Mizuno, Y., Thompson, T.G., Guyon, J.R., Lidov, H.G., Brosius, M., Imamura, M., Ozawa, E., Watkins, S.C. and Kunkel, L.M. 2001. Desmuslin, an intermediate filament protein that interacts with α -dystrobrevin and desmin. *Proc. Natl. Acad. Sci. USA* 98: 6156-6161.
2. Mizuno, Y., Puca, A.A., O'Brien, K.F., Beggs, A.H. and Kunkel, L.M. 2002. Genomic organization and single-nucleotide polymorphism map of desmuslin, a novel intermediate filament protein on chromosome 15q26.3. *BMC Genet.* 2: 8.
3. Mizuno, Y., Guyon, J.R., Watkins, S.C., Mizushima, K., Sasaoka, T., Imamura, M., Kunkel, L.M. and Okamoto, K. 2004. β -synemin localizes to regions of high stress in human skeletal myofibers. *Muscle Nerve* 30: 337-346.
4. Jing, R., Pizzolato, G., Robson, R.M., Gabbiani, G. and Skalli, O. 2005. Intermediate filament protein synemin is present in human reactive and malignant astrocytes and associates with ruffled membranes in astrocytoma cells. *Glia* 50: 107-120.
5. Robson, R.M., Huiatt, T.W. and Bellin, R.M. 2005. Muscle intermediate filament proteins. *Methods Cell Biol.* 78: 519-553.

CHROMOSOMAL LOCATION

Genetic locus: SYNM (human) mapping to 15q26.3; Synm (mouse) mapping to 7 C.

SOURCE

Desmuslin (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Desmuslin of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-49649 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

Desmuslin (E-15) is recommended for detection of Desmuslin isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Desmuslin (E-15) is also recommended for detection of Desmuslin isoforms 1 and 2 in additional species, including porcine.

Suitable for use as control antibody for Desmuslin siRNA (h): sc-60525, Desmuslin siRNA (m): sc-60526, Desmuslin shRNA Plasmid (h): sc-60525-SH, Desmuslin shRNA Plasmid (m): sc-60526-SH, Desmuslin shRNA (h) Lentiviral Particles: sc-60525-V and Desmuslin shRNA (m) Lentiviral Particles: sc-60526-V.

Molecular Weight of Desmuslin: 170 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **Desmuslin (B-8): sc-376944** or **Desmuslin (A-8): sc-374484**, our highly recommended monoclonal alternatives to Desmuslin (E-15).